

Work Order ID 71949

Thursday, July 14, 2011 10:02:12 AM



Page 1

Item ID: D3560-043

Accept



Setup Start



Revision ID:

Stop



Item Name: Arm Weldment

Start Date: 7/14/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 7/22/2011 Req'd Qty: 4.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

11-07-17

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3560

Rev D

100

0.00



BAND SAW

and FX, 11/07/26

0.00

Bandsaw

Memo

Jcaspa Bandsaw

Cut blanks 15.500" long

110

0.00



HAAS CNC VERTICAL MACHINING #1

0.00

HAAS 1

Memo

HAAS CNC vertical machine #1

1- Mill as per Folio FA695 Rev: AA & Dwg D3560 Rev: D JL 11-07-27
2-C'sink 0.196" hole on manual mill as per dwg D3560
3-Deburr per dwg D3560

120

0.00



QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

Quality Control

JL 11-07-27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

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Cust Item ID:

Required Date: 7/22/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00		B.A 11/07/28		8	4		
140 Large Fab Large Fab	Large Fab Memo	0.00 0.00				8	0		
1-Weld assembly as per dwg D3560 STEP: 1- clean material (buff bracket and bottom of arm with blue pad) 2- set up bracket and arm on jig 3- preheat bracket and arm with torch 4- clean before welding with brush 5- set up machine to 135 amps 6- weld across bottom and top ends 7- reheat with torch (65 deg C) 8- on one side weld from bottom to top half way 9- same for other side (half way) 10- from half way point weld the rest of the first side (ease off pedal near end) 11- same for remaining side (ease off pedal near end)									

K 11.08.04

W/O:		WORK ORDER CHANGES					
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Required Date: 7/22/2011 Req'd Qty: 4.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

160

QC9- Inspect visual per QSI004- Fusion Welds

0.00



QC

Memo

0.00

Quality Control

170

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

Dulos

②
-513

8 8 8/10/08/08

8x 8 M. 1/10/08/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____






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NOTE: Date & initial all entries




Work Order ID 71949

Thursday, July 14, 2011 10:02:12 AM

Page 4

Item ID: D3560-043 Accept  Setup Start 
Revision ID: Stop 
Item Name: Arm Weldment
Start Date: 7/14/2011 Start Qty: 4.00  Cust Item ID:
Required Date: 7/22/2011 Req'd Qty: 4.00  Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start 
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180  QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				8	4	41	4/08/09
190  Small Fab Small Fab	Small Fab Memo 1-Press bushing in D3560 arm per dwg D3562	0.00 0.00							
200  QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							

EP 11/08/10 (8)

8 4/08/10

(8)

243

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Page 5

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Cust Item ID:

Required Date: 7/22/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

Identify as per dwg & Stock Location: WA

0.00



Packaging

Memo

0.00

Packaging

*** STOCK IN STEP CELL ***

[Signature] 10-08-10

220

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

CK 11/08/11

11-05-11
(5)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR: Yes No** **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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Picklist Print

Thursday, July 14, 2011 10:02:18 AM

Page 1

Work Order ID: 71949

Parent Item: D3560-043

Parent Item Name: Arm Weldment

Start Date: 7/14/2011

Required Date: 7/22/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 07.05.24 EC
IPP Rev B ECN 987 07.10.09 EC
IPP Rev:C ECN1048 07-12-18 DD verified by: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2808

Manufactured

No

100

Each

17.0000

1

4



Bushing

Location

Loc Qty

Loc Code

GA

2

32896

2

ST023

15

69609

3

69892

12

M6061T6B0.500X05.00

Purchased

No

140

f

35.1350

1.295

5.452632

0



6061-T6 Bar .500 x 5.00

Location

Loc Qty

Loc Code

MAT004

35.135

112154

6.935

117933

28.2

D3592-1

Manufactured

No

190

Each

49.0000

1

4



Plate

Location

Loc Qty

Loc Code

WA002

49

47015

2

48517

47

[Handwritten signature]

BK 11/07/26

10.33

11.08.04

8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	71949
Description: Arm		Part Number:	D3560-4
Inspection Dwg: D3560	Rev: D	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.507	+0.000/-0.001	5065	✓		DT9526E	
Ø0.196	+0.005/-0.001	197	✓		Vern JL3	
Ø1.000	+0.010/-0.001	1.002	✓			
Ø0.900	+0.010/-0.001	903	✓			
0.500	+/-0.010	487		✓		stack mat'l
0.250	+/-0.010	250	✓			
0.275	+/-0.010	274	✓			
0.188	+/-0.010	187	✓		Mic JL-4	
1.750	+/-0.010	1.750	✓			
1.702	+/-0.010	1.702	✓			
Ø0.385 x 100°	+/-0.010 x 0.5°	380x100	✓			
0.250 Deep	+/-0.010	254	✓			

Measured by:	SL	Audited by:	B.A	Prototype Approval:	N/A
Date:	11-07-27	Date:	11/07/28	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.01.17	New Issue	KJ/JLM	
B	07.06.13	Dimensions updated per Dwg Rev B	KJ/JLM	
C	10.02.02	Dimensions updated per Dwg Rev C	KJ	

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

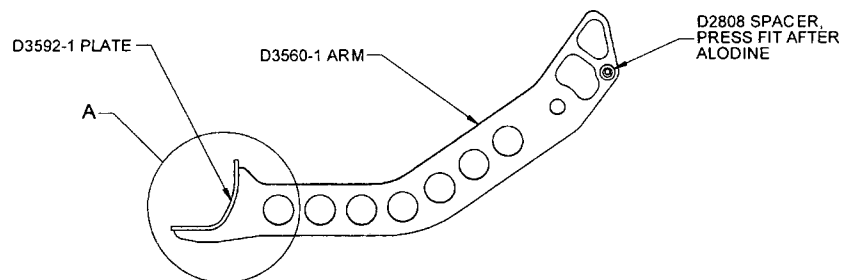
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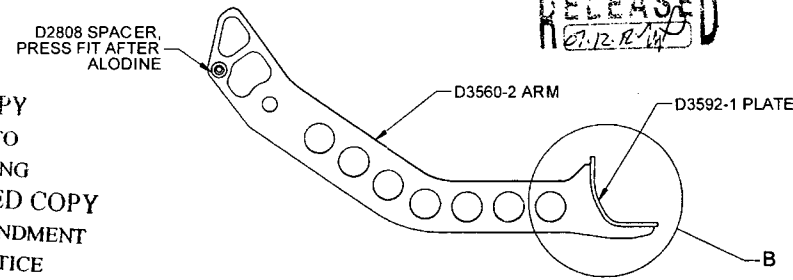
RELEASED
07.12.14

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 71949

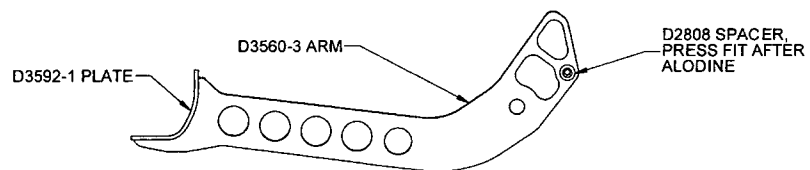
211-07-14



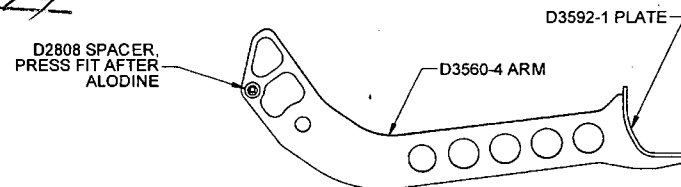
D3560-041 ARM WELDMENT



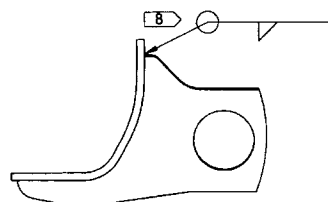
D3560-042 ARM WELDMENT



D3560-043 ARM WELDMENT



D3560-044 ARM WELDMENT



**DETAIL A
SCALE 1:2**

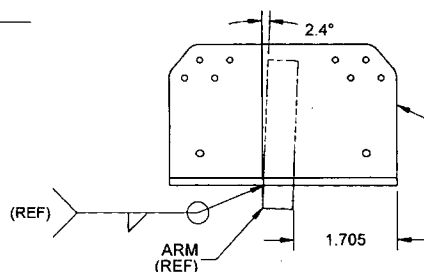
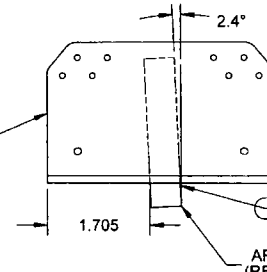
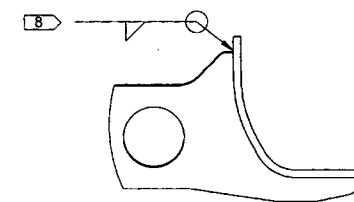


PLATE
(REF)



ARM
(REF)



**DETAIL B
SCALE 1:2**

PARTS LIST

QTY -041	QTY -042	QTY -043	QTY -044	P/N	DESCRIPTION
X				D3560-041	ARM WELDMENT
	X			D3560-042	ARM WELDMENT
		X		D3560-043	ARM WELDMENT
			X	D3560-044	ARM WELDMENT
1	1	1	1	D2808	SPACER
1				D3560-1	ARM
	1			D3560-2	ARM
		1		D3560-3	ARM
			1	D3560-4	ARM
1	1	1	1	D3592-1	PLATE

DESIGN	D	ADD D2808 PRESS FIT NOTE; REDRAWN IN SOLIDWORKS	DC	07.11.16
DRAWN	C	REMOVE POWDER COAT	CP	07.06.19
CHECKED	B	REDESIGN AS WELDMENT, ADD POCKETS	CP	07.01.15
MFG. APPR.	A	NEW ISSUE	CP	06.09.25
APPROVED	REV.	DESCRIPTION	BY	DATE
DE APPR.				
DATE	07.11.16			
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3560 TITLE ARM WELDMENT COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD				
REV. D				SHEET 1 OF 5
SCALE				1:4

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.23 lbs (TYP)
 - 8) WELDING: PER DART QSI 004

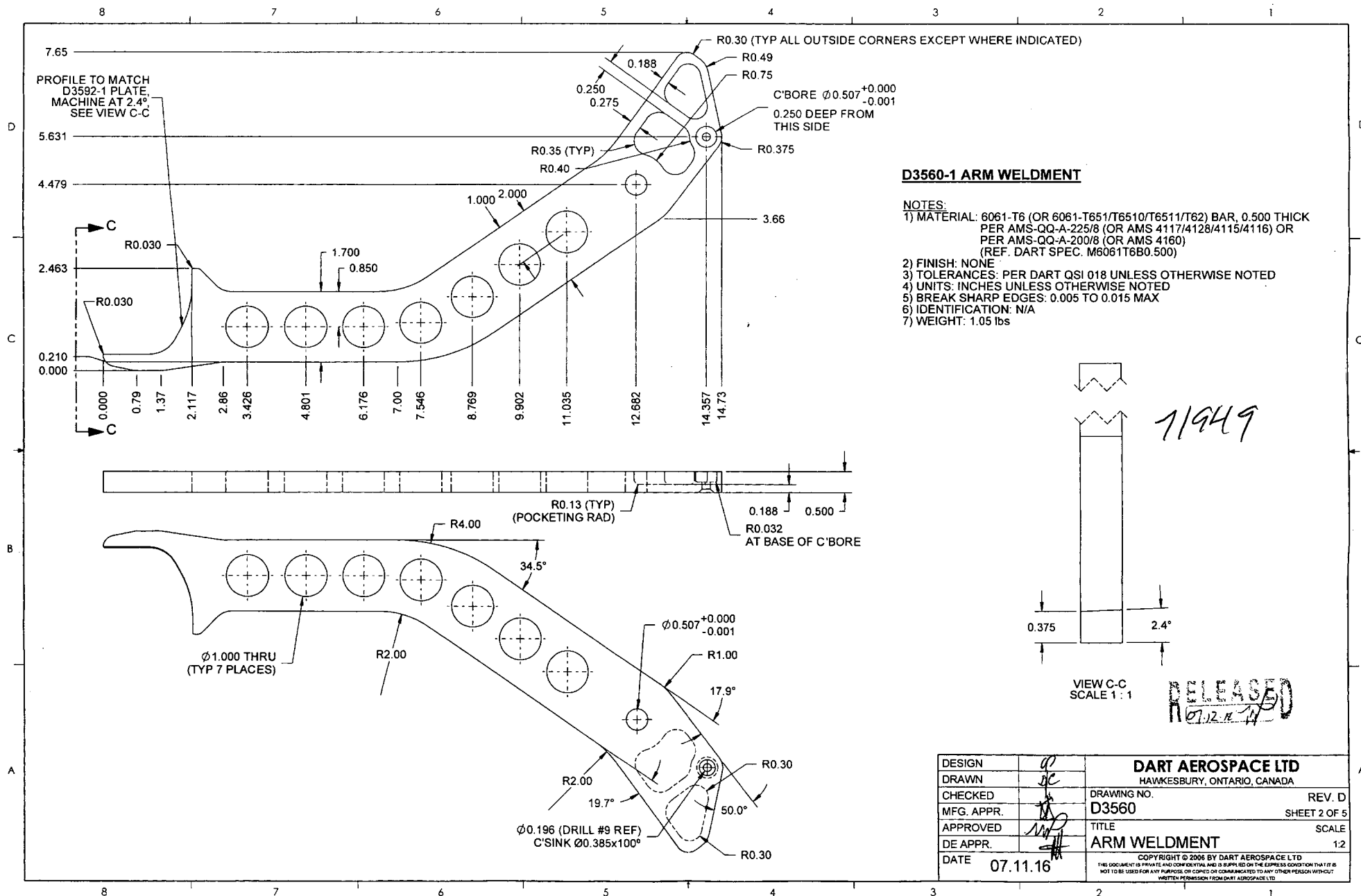
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3560-1 ARM WELDMENT

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
 PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
 PER AMS-QQ-A-200/8 (OR AMS 4160)
 (REF. DART SPEC. M6061T6B0.500)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.05 lbs

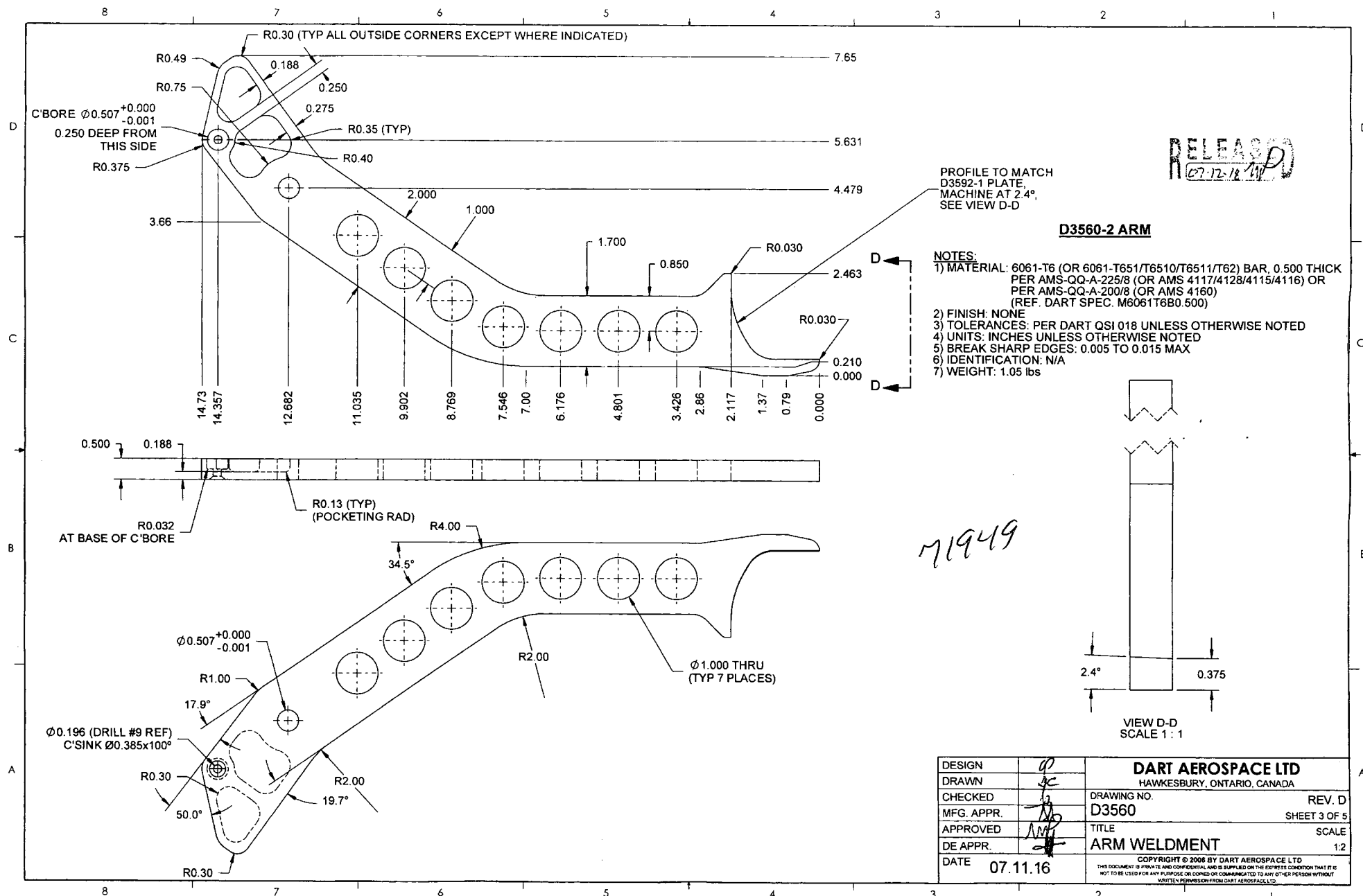
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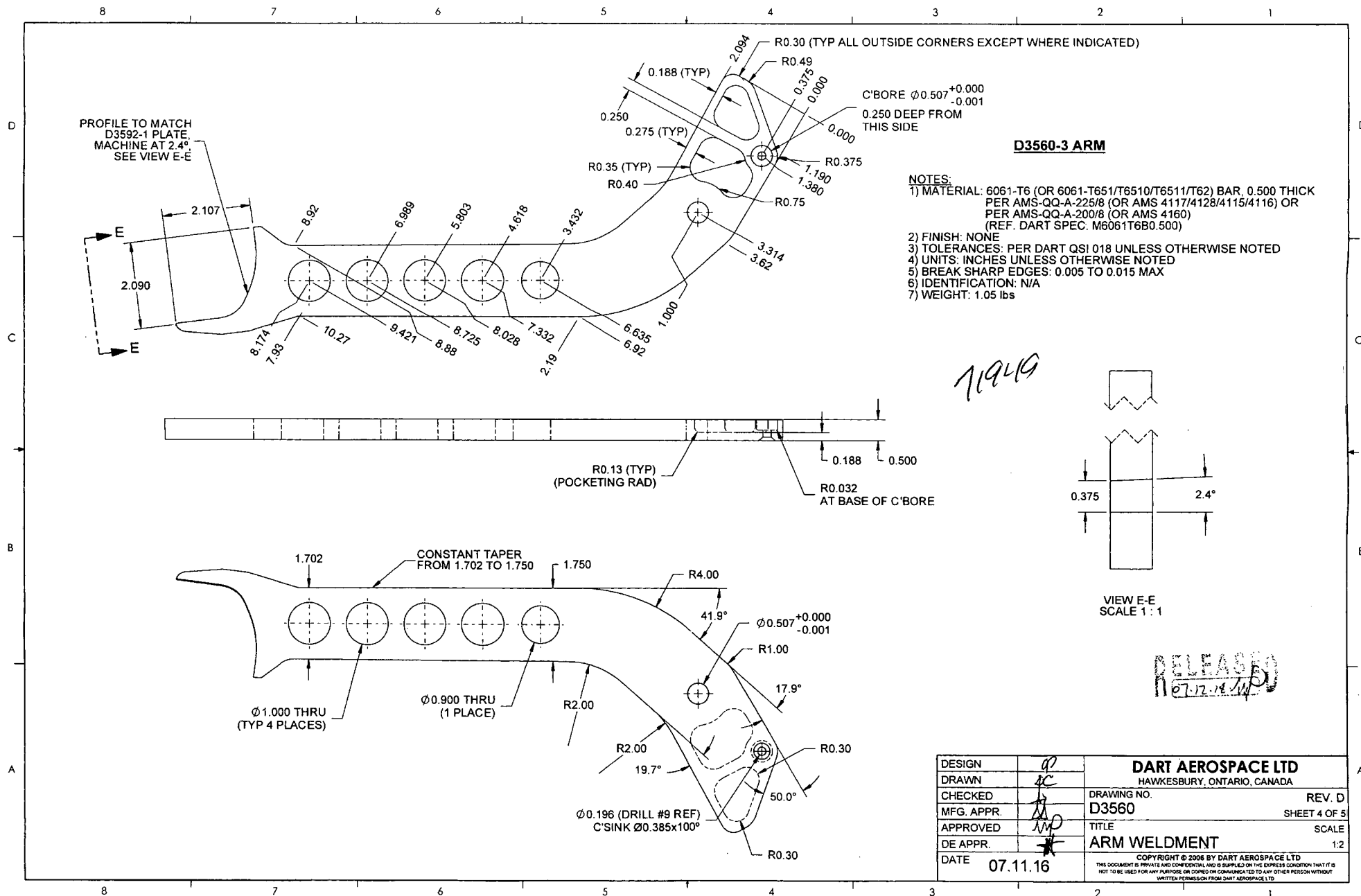
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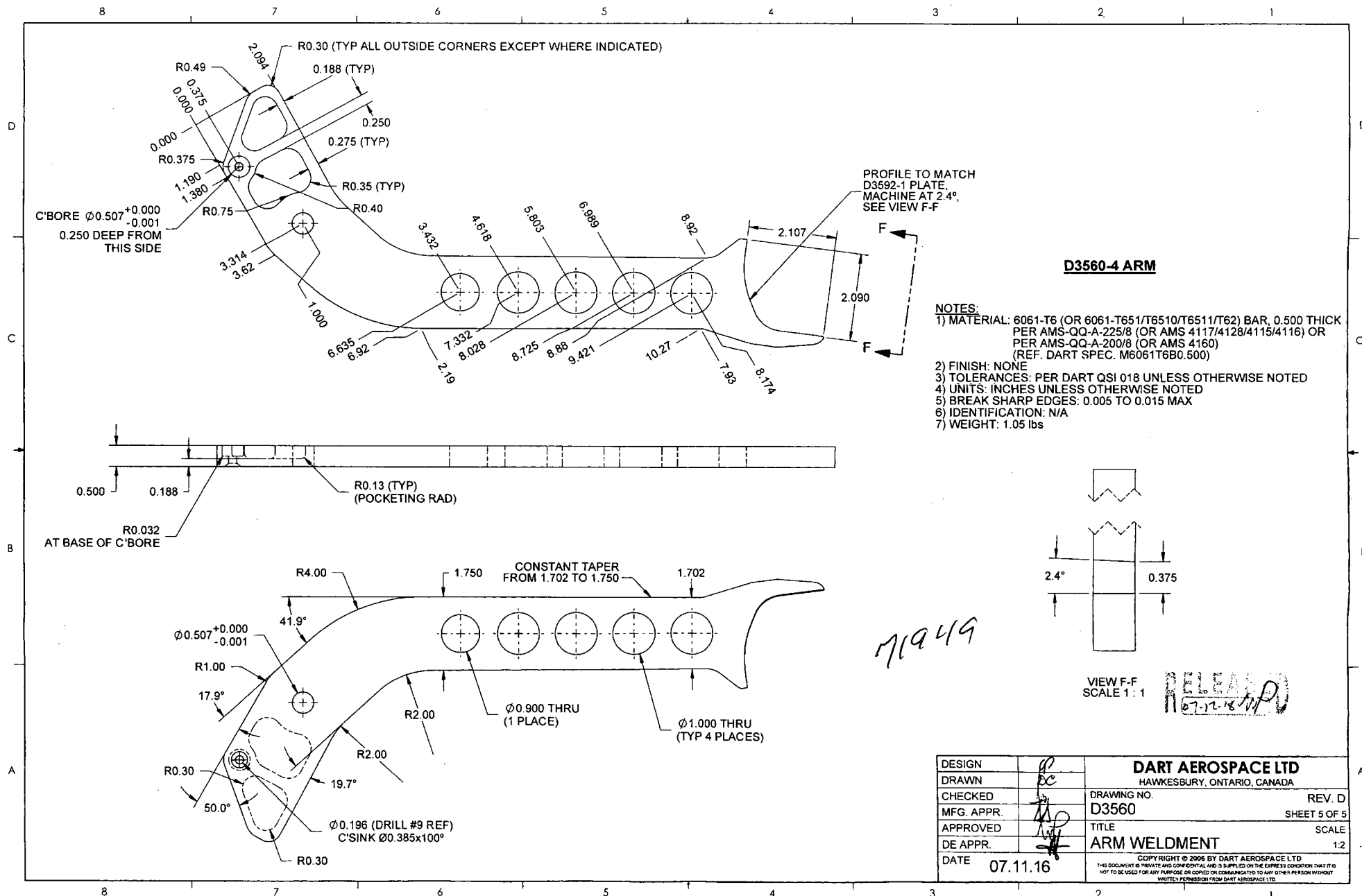
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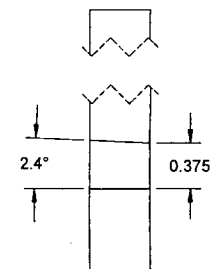
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NOTE: Date & initial all entries



D3560-4 ARM

- NOTES:**
- 1) MATERIAL: 6061-T6 (OR 6061-T6511/T6510/T6511/T62) BAR, 0.500 THICK PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR PER AMS-QQ-A-200/8 (OR AMS 4160) (REF. DART SPEC. M6061T6B0.500)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.05 lbs



VIEW F-F
SCALE 1:1

DESIGN		DART AEROSPACE LTD	
DRAWN	BC	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. D
MFG. APPR.		D3560	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		ARM WELDMENT	1:2
DATE	07.11.16	COPYRIGHT © 2006 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

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